

FOR FURTHER REFERENCE

Readers seeking additional information about industrial property types may find several helpful sources for understanding each industry addressed in this field guide and related buildings and structures. A handful of general studies are included that provide practical knowledge about industrial properties and related architectural styles. Betsy H. Bradley's *The Works: The Industrial Architecture of the United States* (Oxford University Press, New York, 1999) concentrates on manufacturing establishments, but offers an excellent glossary of terms that has much broader applications. Ann Durkin Keating's *Invisible Networks: Exploring the History of Local Utilities and Public Works* (Exploring Community History Series, eds. David E. Kyvig and Myron A. Marty, Krieger Publishing Company, Malabar, Florida, 1994) provides guidance on documenting local historical aspects of utility companies. A thoughtful study by Robert B. Gordon and Patrick M. Malone, *The Texture of Industry: An Archaeological View of the Industrialization of North America* (Oxford University Press, New York, 1994), offers an overview of industrial complexes from an archeological perspective. Carole Rifkind's book *A Field Guide to American Architecture* (New American Library, New York, 1980) has comments and drawings pertinent to industrial property types, although she focuses on the eastern United States. Two other important books are those by Richard Longstreth, *The Buildings of Main Street: A Guide to American Commercial Architecture* (AltaMira Press for the American Association for State and Local History, Nashville, updated edition 2000, original published in 1987), and Virginia McAlester and Lee McAlester *A Field Guide to American Houses* (Alfred A. Knopf, New York, updated edition 1997, original published in 1984). Although each of these guides concentrates on property types other than those related to industry, they offer relevant insight to analyzing form and style.

Information about the petroleum and natural gas industries is voluminous. One study that takes a global approach, but concentrates strictly on drilling practices, is J. E. Brantly's *History of Oil Well Drilling* (Gulf Publishing Company, Houston, 1971). Two other comprehensive studies are *Petroleum Encyclopedia: Done in Oil* (The Ranger Press, Inc., New York, 1941) by David D. Leven and *The American Petroleum Industry: The Age of Energy, 1899–1959* by Harold F. Williamson, Ralph L. Andreano, Arnold R. Daum, and Gilbert C. Klose (Northwestern University Press, Evanston, 1963). Studies on the oil industry that are specific to Texas include Wayne Gard's *The First 100 Years of Texas Oil & Gas* (Mid-Continent Oil and Gas Association, 1966), Thelma Johnson et al.'s *The Spindle Top Oil Field: A History of Its Discovery and Development* (n.p., n.p., 1927, available at the Perry-Castañeda Library, University of Texas, Austin), Richard R. Moore's "The Impact of the Oil Industry in West Texas" (M.A. Thesis, Texas Tech University, Lubbock, 1965), and Walter Rundell's *Early Texas Oil: A Photographic History, 1866–1936* (Texas A&M University Press, College Station, 1977) and *Oil in West Texas and New Mexico: A Pictorial History of the Permian Basin* (Texas A&M University Press for the Permian Basin Petroleum Museum, Library and Hall of Fame in Midland, College Station, 1982). Perhaps the most important books on the Texas oil industry are those of Diana

David Olien and Roger M. Olien, *Oil Booms: Social Change in Five Texas Towns* (University of Nebraska Press, Lincoln, 1982), *Wildcatters: Texas Independent Oil Men* (Texas Monthly Press, Austin, 1984), *Life in the Oil Fields* (Texas Monthly Press, Austin, 1986), and their latest book *Oil in Texas: The Gusher Age, 1895–1945* (University of Texas Press, Austin, 2002).

Several publications relate the history of a specific oil company. Chief among these are Henrietta M. Larson's and Kenneth Wiggins Porter's *History of Humble Oil & Refining Company: A Study in Industrial Growth* (Harper & Brothers Publishers, New York, 1959), Louis C. Arnett's "The Humble Oil & Refining Company of Texas" (M.A. Thesis, University of Texas, Austin, 1924), and Continental Oil Company's self-published *Conoco: The First One Hundred Years: Building on the Past for the Future* (Special Marketing Division, Dell Publishing Company, Inc., New York, 1975). Companies also published in-house newsletters that are largely unmined. These include *The Humble Way*, *The Benedum-Trees Loose Leaf*, and *Magnolia News*, among others.

Other sources are essential to understanding the petroleum and natural gas industry. Two publications, *The Oil and Gas Journal* and *The Oil Weekly*, offer articles on all aspects of the industry, plus manufacturers' advertisements that reveal additional information about technology, buildings, and structures related to petroleum and natural gas. *The Oil Weekly* also published annually the *Composite Catalog of Oil Field and Pipe Line Equipment* beginning in 1929. The Petroleum Museum, in Midland, has extensive photographic collections, although many of the items are not cataloged. The personal collection of William Osborn, in Austin, includes many images of buildings and structures.

Two broad studies of the grain industry are William C. Edgar's *The Story of a Grain of Wheat* (D. Appleton and Company, New York, 1925) and Herman Steen's *Flour Milling in America* (T. S. Denison & Company, Inc., Minneapolis, 1963). Edgar takes a world history approach to the industry and discusses grain in ancient times, as well as in contemporaneous Britain and Argentina. He also reflects on the wheat fields of the future and the progress of milling in America. Steen focuses on mills in the United States from their East Coast beginnings to the monopolies of the Midwest. Most useful is his brief review of milling company histories, by state, in which he devotes 17 pages to Texas companies in Amarillo, Dallas, Denton, Fort Worth, Gainesville, Galveston, Greenville, Houston, McKinney, New Braunfels, Paris, Plainview, San Antonio, Seguin, Sherman, Vernon, Waco, and Wichita Falls.

Four other studies are particularly useful for understanding properties related to the grain industry because they offer specific descriptive information, corresponding illustrations, and photographs. George O. Carney authored "Grain Storage and Processing Facilities in Western Oklahoma" (Oklahoma Historical Society, Oklahoma City, 1999), which offers detailed descriptive information about grain processing and storage facilities and their respective constituent parts. He succinctly describes milling processes for the layperson's easy understanding. Although *Mills of Yesteryear* by A. T. Jackson (Texas Western Press, El Paso, 1971) is scant on interpretation, it presents several images of nineteenth century mill properties in Texas. Frank Gohlke and John C. Hudson, provide two pensive essays on grain elevators in Gohlke's *Measure of Emptiness: Grain Elevators in the American Landscape* (Creating the North American Landscape Series, George F. Thompson, ed. Johns Hopkins University Press, Baltimore, 1992). But a picture says a thousand words, and Gohlke's photographs of grain elevators, mostly in Texas, portray dramatic images of these massive functional structures. An older volume, *The Design of Walls, Bins, and Grain Elevators* (The Engineering News Publishing Company, New York, 1911, second edition), by Milo S. Ketchum, provides detail and line drawings. Ketchum discusses the physics of grain storage with theories and algebraic methods. He reports the problems of retaining walls and experiments for improving them. More importantly, he presents all types of bins and elevators built in a variety of designs and materials.

Numerous sources address all aspects of the cotton industry. General studies are helpful to understanding cotton production and ginning. A few useful older publications are Anderson, Clayton & Co.'s *Texas Cotton from Seed to Mill* (Anderson, Clayton & Co., Houston, 1937), Henry Julius Boehm's "Texas Cotton Co-operative Association" (M.A. Thesis, University of Texas, Austin, 1935), H. M. Eliot's *Farmers' Cooperative Gins in Texas* (Division of

Farm and Ranch Economics, Texas Agricultural Experiment Station, Texas A&M University, College Station, 1920), and the U.S. Bureau of Agricultural Economics's *Texas Cotton: Estimated Acreage, Yield, and Production, 1928–1937, by Counties* (Office of the Agricultural Statistician, Austin, 1939). A few works offer regional insights, such as “The Quality, Costs and Economic Aspects of West Texas Cotton Ginning” by William E. Franklin Jr. (M.A. Thesis, Texas Tech University, Lubbock, 1950), “A Survey of Cotton Production in Northwest and South Texas” by Albert Brice Taylor (M.A. Thesis, University of Texas, Austin, n.d.), and *Practices and Costs of Cotton-Gin Operation in North-Central Texas, 1924–1925* by James S. Hathcock (Technical Bulletin 13, Division of Cooperative Marketing, Bureau of Agricultural Economics, U.S. Department of Agriculture, Washington, D.C., 1927).

Analyses that examine cotton gins and ginning can be either broad or narrowly focused. Works that are encompassing include *Cotton Ginning Systems in the United States and Auxiliary Developments* by Charles A. Bennett (*Cotton Ginner's Journal* and *The Cotton Gin and Oil Mill Press*, Dallas, 1962), and *Bale o' Cotton: The Mechanical Art of Ginning* by Karen Gerhardt Britton (Texas A&M University Press, College Station, 1992). Two important theses are those of Raymond E. White and Jim Chien-Sheng, who respectively wrote “The History of the Texas Cotton Ginning Industry, 1822–1957” (M.A. Thesis, University of Texas, Austin, 1957) and “A Study of the Cotton Gin and Its Operation” (M.A. Thesis, Texas Tech University, Lubbock, 1950). On a more personal level, A. L. Vandergriff contributed his singular *Ginning Cotton: An Entrepreneur's Study* (Texas Tech University Press, Lubbock, 1997), which chronicles his life experiences as a ginner. In addition, journals published for the ginning industry, provide much in the way of details about operations, buildings, structures, and equipment; especially helpful is *The Cotton Ginners' Journal*, published by the Texas Cotton Ginners' Association in Dallas. Detailed interpretations of cotton gins include Michelle Sharon Gayle Cluck Hainze's “Analysis of Cotton Gin Buildings in the South Plains Region” (M.A. Thesis, Texas Tech University, Lubbock, 1999) and James Ricky Lewis's “Texas Cotton Gin House Architecture” (M.A. Thesis, The University of Texas at Austin, 1987).

Cotton gin manufacturers often published materials. These might include contemporaneous catalogs, like the Munger Improved Cotton Machine Manufacturing Company's *Catalogue and Price List* (Dallas Litho Job Print, Dallas, 1889), or promotional materials, like *The Murray Company, Its History, Growth, Present Extent, Facilities and Service, and Its Products* by the Murray Company (Bulletin No. 1, Dallas, 1929). Companies also published corporate histories, such as the book by Algernon L. Smith, *The Continental Gin Company and Its Fifty-Two Years of Service* (Continental Gin Company, [Birmingham], 1952).

Once subsidiary to cotton ginning, the cottonseed crushing aspect of the industry became increasingly important in the twentieth century. Several valuable works on this topic include A. B. Cox's *The Cottonseed Crushing Industry of Texas in Its National Setting* (The Cotton Research Committee of Texas, University of Texas, Austin, 1949), William N. Stokes Jr.'s *Oil Mill on the Texas Plains: A Study in Agricultural Cooperation* (Texas A&M University Press, College Station, 1979), and Lynette Wrenn's *Cinderella of the New South: A History of the Cotton Seed Industry, 1855–1955* (University of Tennessee Press, Knoxville, 1995). Publications, such as *Storing of Seed Cotton as an Aid to More Efficient Ginning and Marketing* by J. M. Ward, W. E. Paulson, and D. L. Jones (Texas Agricultural Experiment Station, Bulletin 765, College Station, 1953), offer specific information about storage facilities. The industry had two important journals, *The Cotton Oil Press*, which was published from 1917 to 1935, and *The Cotton Gin and Oil Mill Press*, begun in 1900 and still in publication. Available at the Southwest Collection at Texas Tech University are the appraisal books of the Hill County Oil Company. These provide raw data on the company's holdings between 1918 and 1931, accounting for each component of the several mills and related equipment, from presses to bins to buildings to vehicles, owned and acquired during these years.

The utilities and services industries encompasses several entities, including electric, water, telephone, ice service, and bottling works. Several publications are informative about particular electric companies. Vance Gillmore's *And the Work Was Made Less* (Texas Electric Service Company, [Fort Worth], 1976), Robert L. Johnson's *Texas Power & Light Company, 1912–1972* (Texas Power & Light Company, [Dallas], 1973), Bennett L. Smith's *Com-*

community Public Service Company: *Its History, People, and Places* (Bennett L. Smith, Fort Worth, 1975), and the Southwestern Public Service Company's publication *The Southwesterner*, each offer insight into specific electric companies. In addition, the Central and South West Corporation has papers that cover the 1950s in the Southwest Collection at Texas Tech University in Lubbock.

Telephone companies often have published histories. Useful volumes include W. M. Gilker's compilation, *Southwestern Bell Telephone Company, Dallas Telephone History, 1881–1963* (Southwestern Bell Telephone Company, Dallas, 1963), Jerry F. Hall's edited *Hello, Texas: A History of Telephony in the Lone Star State* (Texas Telephone Association, Austin, 1990), Larry Johnson's *The Heritage of Time: The People and Times of GTE Southwest, 1876–1988* (Newsfoto Publishing Co., San Angelo, 1990), and David G. Park's *Good Connections: A Century of Service by the Men & Women of Southwestern Bell* (Southwestern Bell Telephone Company, St. Louis, 1984).

Ice services have been well studied and numerous publications provide excellent documentation of the industry. A few historical pieces of note are J. J. Cosgrove's *Sanitary Refrigeration and Ice Making* (Standard Sanitary Mfg. Co., Pittsburgh, 1914), James Baker Marley's "An Analysis of Ice Delivery Methods with Particular Attention Being Given to Practices of the Texas Industry" (MBA Thesis, University of Texas, Austin, 1925), and articles in the *Southwestern Ice Manufacturers' Association Bulletin* (Southwestern Ice Manufacturers' Association 1934–1952). Helpful syntheses of the ice industry up through the early twentieth century are *The American Ice Harvests: A Historical Study in Technology, 1800–1918* by Richard Osborn Cummings (University of California Press, Berkeley, 1949) and *America's Icemen: An Illustrative History of the United States Natural Ice Industry, 1665–1925* (Jobeco Books, Humble, Texas, 1984).

Few sources are available on water service. The most useful was T. Lindsay Baker's *Building the Lone Star State: An Illustrated Guide to Historic Sites* (No. 23: The Centennial Series of The Association of Former Students, Texas A&M University, Texas A&M University Press, 1986). Baker reviews numerous types of properties, including waterworks and sewage plants. Simon W. Freese and Deborah Lightfoot Sizemore prepared *A Century in the Works: Freese and Nichols Consulting Engineers, 1894–1994* (Texas A&M University Press, College Station, 1994). This volume documents the firm's work, which included several waterworks, filtration plants and sewage treatment plants. Another publication that covered several topics, including water service, is *Greater Dallas Illustrated* by the American Illustrating Company (The American Illustrating Company, 1908; reprint Friends of the Dallas Public Library, Dallas, 1992). A large volume that the Public Works Administration put together is exceptionally helpful to understanding properties constructed from 1933 to 1939. C. W. Short and R. Stanley Brown co-authored *Public Buildings: A Survey of Architecture of Projects Constructed by Federal and Other Governmental Bodies between the Years 1933 and 1939* (Government Printing Office, Washington, D.C., 1939). The book is national in scope, but offers several Texas examples of utilities properties like sewage facilities and waterworks.

Likewise, information on bottling works was relatively scarce. The best available source was *Industrial Buildings; The Architectural Record of a Decade* compiled by Kenneth Reid (F. W. Dodge Corp. for *Architectural Record*, New York, 1951). A later publication that offered some additional information was *Buildings for Industry* prepared by *Architectural Record* (F. W. Dodge Corp. for *Architectural Record*, New York, 1957).

In cases like water service and bottling works, where source materials are limited, several more general works may be helpful. The internet has many useful resources, such as the Sanborn Map Company's fire insurance maps, and a wealth of articles that are available by searching various terms. An excellent publication is *Out of the Dreams of Yesterday: West Texas Utilities Company*, which the company authored and published in 1927. This promotional brochure portrays not only the company's own utilities establishments, but also highlights those of competitors and of other industries, including petroleum and natural gas, grain, and cotton. It is available at The Center for American History at The University of Texas at Austin.